

# National Missile Defense Program



## NMD Joint Program Office

**BG Willie B. Nance, Jr., USA**  
**Program Manager**



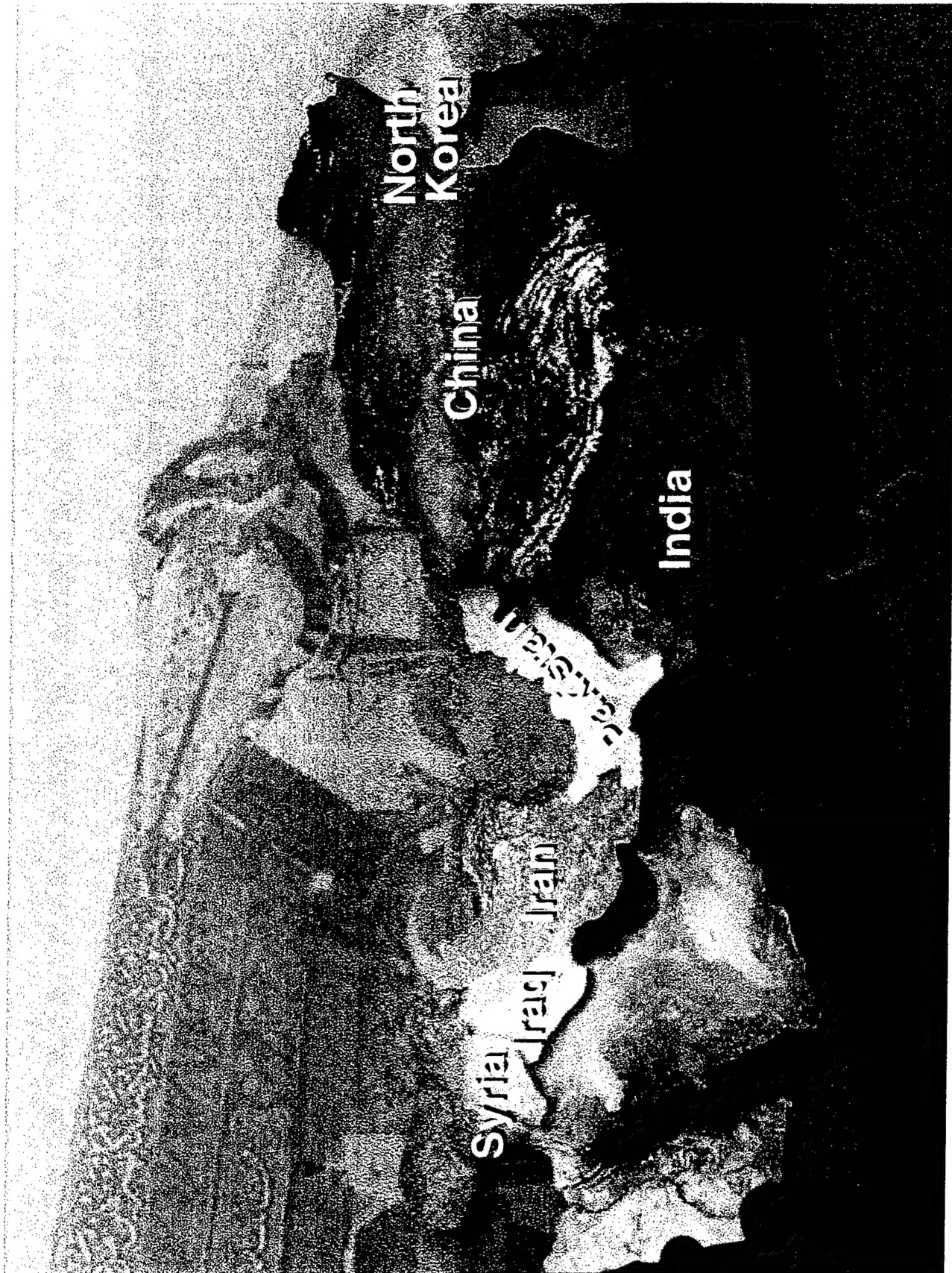
**“The Ballistic Missile Threat Is Broader,  
More Mature, And Evolving More Rapidly  
Than Has Been Reported By The  
U.S. Intelligence Community.”**

***-The Rumsfeld Commission  
August 4, 1998***



“...Provide For The Common Defense...”

*-Preamble, Constitution Of  
The United States*







THE PENTAGON

# **“National Missile Defense Development Has Been A Priority For The Joint Chiefs And The Unified Commanders.”**

*General Henry H. Shelton  
Chairman Joint Chiefs of Staff  
January 20, 1999*

**“It Is The Policy Of The United States  
To Deploy As Soon As Is Technologically  
Possible An Effective National Missile  
Defense System Capable Of Defending  
The Territory Of The United States  
Against Limited Ballistic Missile  
Attack...”**

*The National Missile Defense Act Of 1999  
Section 2: National Missile Defense Policy  
Awaiting Presidential Signature*

**“We Are Committed To The  
Development Of A Limited  
National Missile Defense  
System...”**

**Samuel R. Berger**  
*Assistant to the President  
for National Security Affairs*  
January 12, 1999





# **"The NMD Program Cannot Afford To Fail."**

*William S. Cohen*  
*Secretary of Defense*  
*January 20, 1999*

*Jaques Gansler*  
*Under Secretary of Defense*  
*(Acquisition & Technology)*  
*February 2, 1999*





## MISSION

**Develop, Demonstrate, And Deploy (When Directed)  
A System To Defend U.S. Against A Limited Strategic  
Ballistic Missile Threat By A Rogue Nation...**

- By 2000, Be In A Position To Make A Deployment Decision Based On An Assessment Of:
  - System Technology & Operational Effectiveness
  - Status Of Threat
  - System Cost
  - Arms Control Objectives
- Develop System Consistent With ABM Treaty
- Deployment May Require ABM Treaty Modification
- Phase Program Key Decisions To Reduce Risk



# NMD KEY REQUIREMENTS



## 1. US Defense

*No Leakers With A Very High Degree Of Confidence*

## 2. Human-In-Control

*Assured Human Control*

## 3. Highly Automated BM/C<sup>3</sup>

*Man-Backed Operation*

***Protect All 50 States Against A Limited Attack***



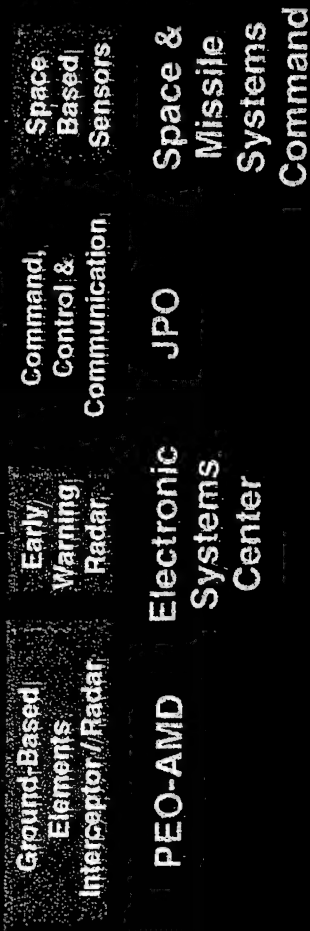
# JOINT PROGRAM TEAM



Deputy For  
System Integration  
  
Prg Mgmt. &  
Control Office

Deputy For  
System Development

## JPO Elements



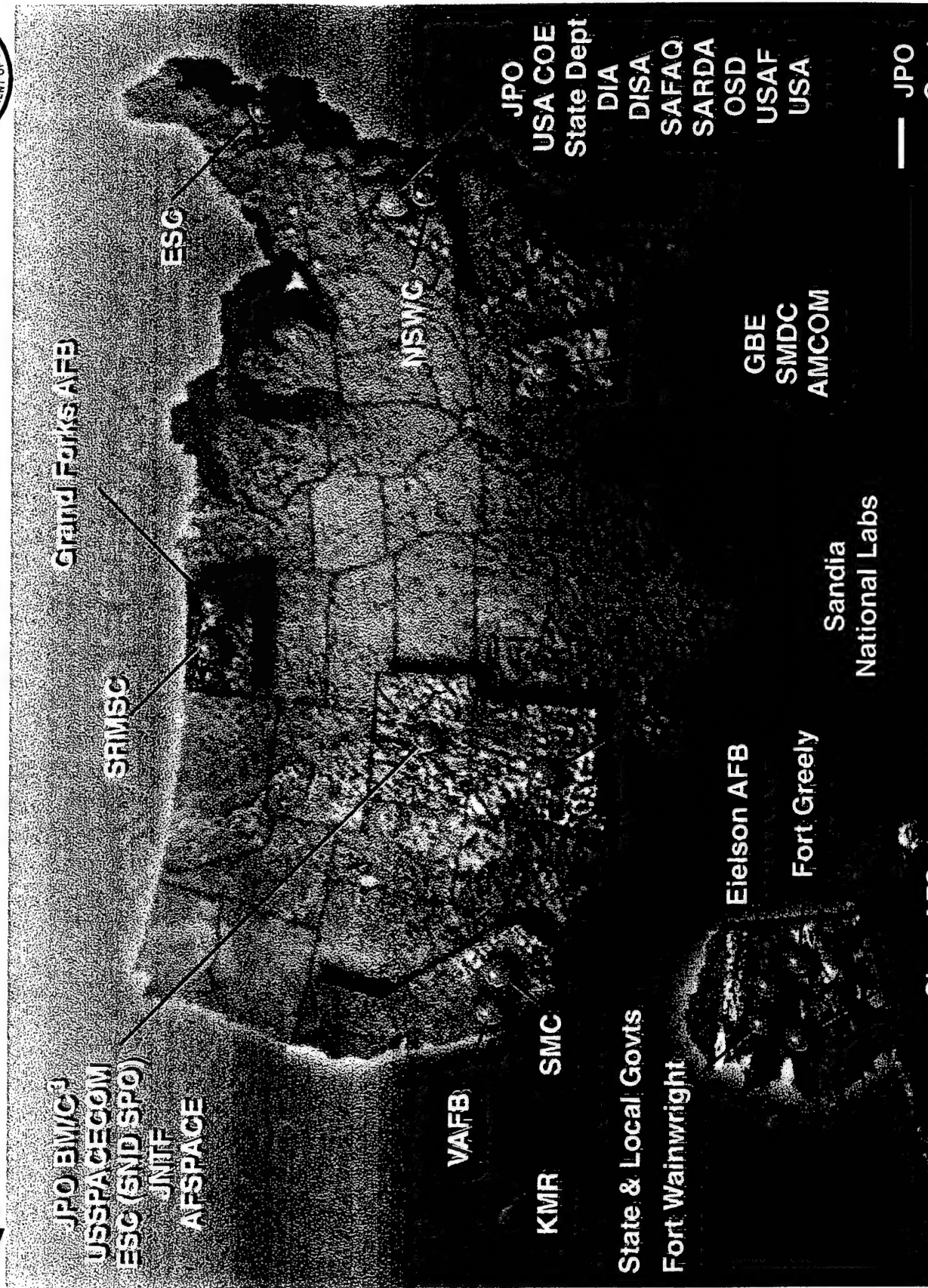
## Support Agencies

- OSD (P)
- State Department
- USSPACECOM
- Defense Information Support Agency
- Defense Intelligence Agency
- Space & Missile Defense Command
- AFSPACE
- Alaska Command
- Corps Of Engineers
- Strategic Nuclear Deterrent SPO
- Vandenberg Air Force Base
- Naval Surface Warfare Center
- Aviation & Missile Command
- Joint National Test Facility
- Kwajalein Missile Test Range
- Sandia National Labs
- Host Installations





# NATIONAL MISSILE DEFENSE - JPO GOVERNMENT -







DE  
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## Continued Development

[illegible]

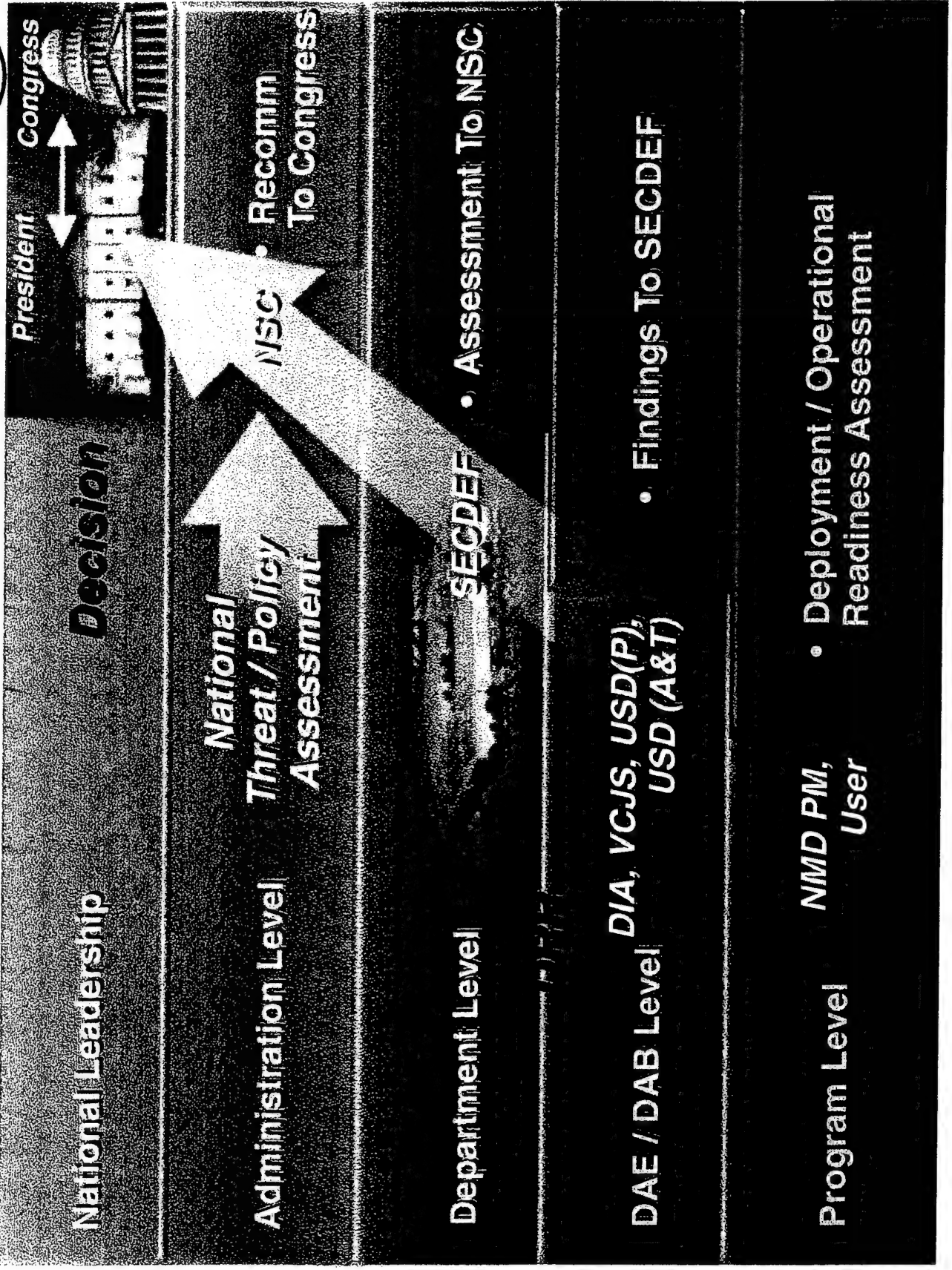
- Commit To Deployment
  - Select Site
  - Approve Construction Contract Award
  - Decide On Emergency Deployment
- Approve Start Of Site Construction
  - Approve Initiation Of Sensors And BM/C<sup>3</sup>
  - Decide On Emergency Deployment

- # Phased Deployment Based Upon Technical Progress

- Approve Weapon Build & Deployment



# NMD DEPLOYMENT DECISION





# SYSTEM ELEMENTS

KV



Kill Vehicle

SBIRS LOW



Space Based Infrared  
System / Low Component

DSP / SBIRS

High



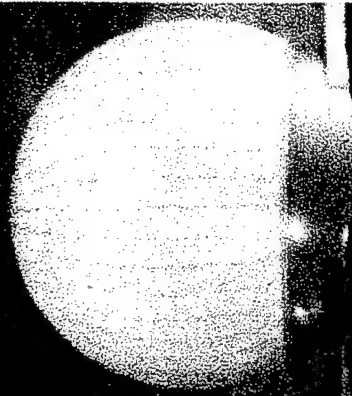
Defense Support Program/  
Space Based Infrared System  
High Component

BM/C<sup>3</sup>



Battle Management / Command,  
Control & Communications

XBR



X Band Radar

Weapon



Weapon System

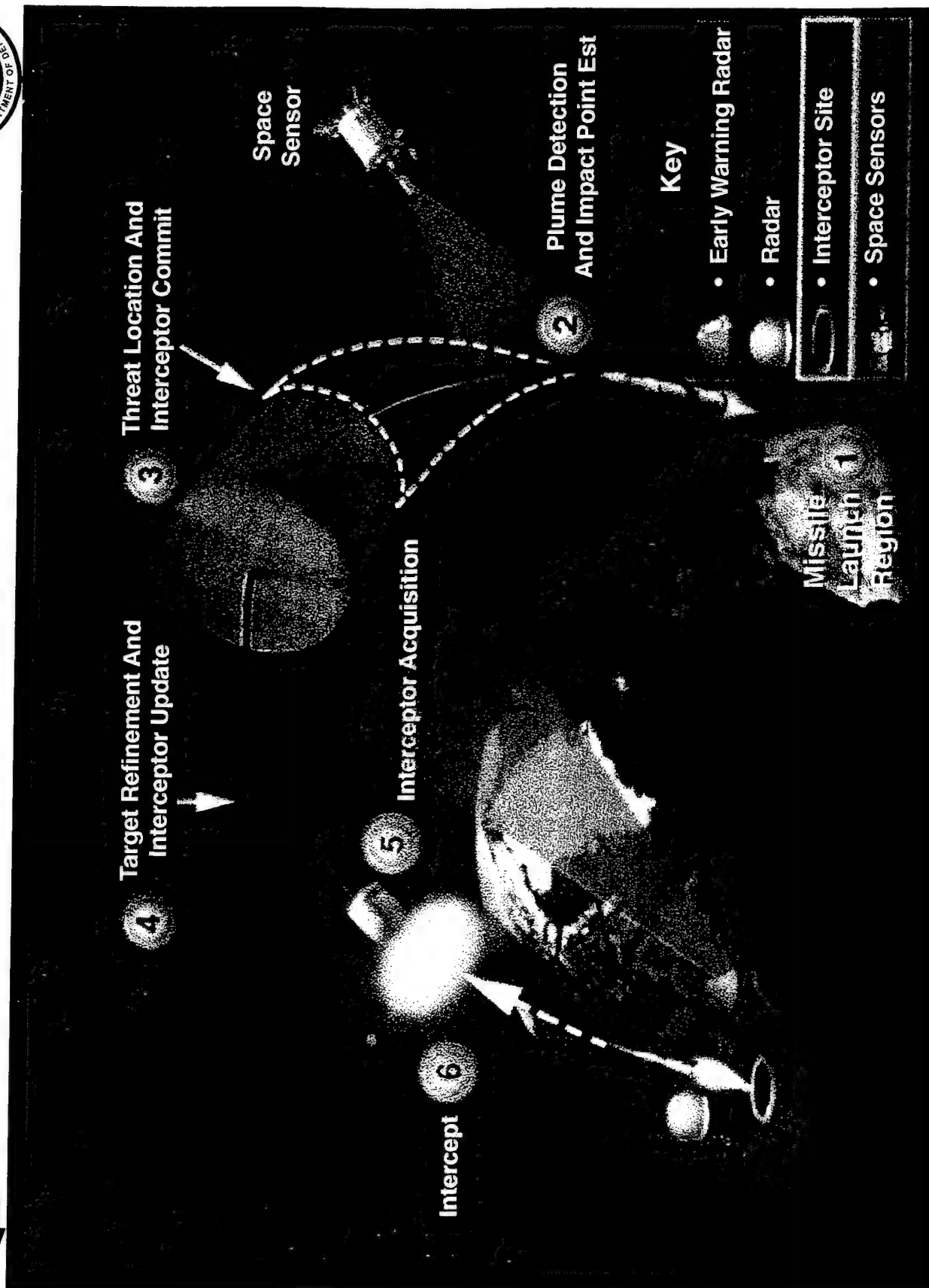
UEWR



Upgraded Early Warning  
Radar



# NMD ENGAGEMENT CONOPS







# NMD ELEMENT STATUS - DSP / SBIRS



DSP / SBIRS  
High

- DSP Operational

- NMD Working Group Established  
With Air Force In FY97

- SBIRS High  
- IOC - FY06

- SBIRS Low  
- FOC - FY10

SBIRS  
Low

Air Force Managed Programs



# NMD UEWR STATUS



- Successfully Demonstrated Initial Integration With BM/C3 During Integrated Ground Testing (IGT-3) - FEB 99
- Successfully Tracked Risk Reduction Flight 4
- Ready For Risk Reduction Flight 6 And Integrated Flight Test 3

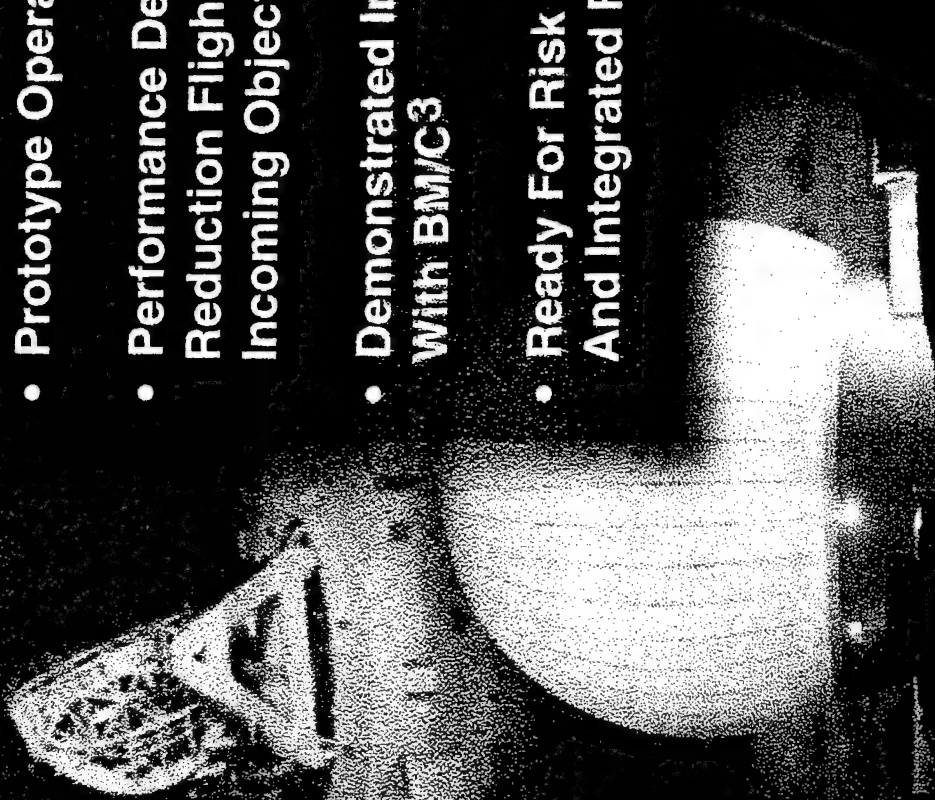
*Upgraded Early  
Warning Radar*



# X BAND RADAR



- Prototype Operating At Kwajalein
- Performance Demonstrated In Risk Reduction Flights - Detected And Tracked Incoming Objects
- Demonstrated Initial Integration With BM/C3
- Ready For Risk Reduction Flight Test 6 And Integrated Flight Test 3



X Band Radar



## NMD WEAPON STATUS



- Successful Sensor Flight - JAN 98
- Successful Hover Test - NOV 98
- IFT-3 Unit In Ground Test



### Operational Booster

- GEM Motor Ready For Integration
  - OCT 99 (Over 520 Flown)
- Orbus Motor (25 Produced, 7 Flown No Failures)
  - Successful Burn Test - JUN 99
- First Verification Test Scheduled
  - FEB 00



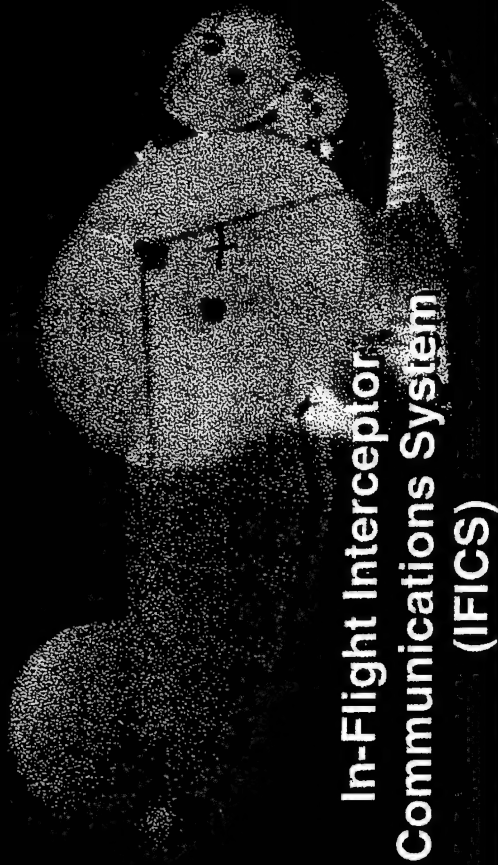


## NMD BM/C<sup>3</sup> / IFICS STATUS



**Battle Management, Command  
Control & Communications**

- BM/C<sup>3</sup> Demonstrated In Major Command And Control Exercise - DEC 98
- Demonstrated Initial Integration With Upgraded Early Warning Radar And X-Band Radar - FEB 99
- Ready For Risk Reduction Flight Test 6



**In-Flight Interceptor  
Communications System  
(IFICS)**



# INTEGRATED FLIGHT TEST PROGRAM

## Flights

IFT 1A/2



Sensor Fly-By

IFT 3



Intercept

IFT 4, 5 & 6



Integrated Flight Test / Intercept

## Program Objectives And Goals

- Risk Reduction For Kill Vehicle Tests
  - Demonstrate Kill Vehicle Sensor Performance
  - Collect Target Signatures To Validate Discrimination Algorithms
- Activate Test Infrastructure
- Demo Target Complex Acquisition
- Demo Onboard Discrimination And Target Selection
- Demo Endgame Performance
- Demo Interoperability Of Elements

IQ00

- Demo End-to-End Integrated System Performance

FY00

# IFT-3 OBJECTIVES

## Primary Objective

- Demonstrate EKV Flight Test Performance
  - EKV Deployment And Orientation
  - Target Complex Acquisition
  - Track Management
  - Real-Time Onboard Discrimination
  - End Game Performance
    - Divert And Homing
    - Intercept

## Key Dates

- April - KV Blowdown Test
- 24 July - Ship Flight Payload EKV System Test Area (ESTA)
- August - Ship Flight Test H/W To KMR
- 1000 - Scheduled Test

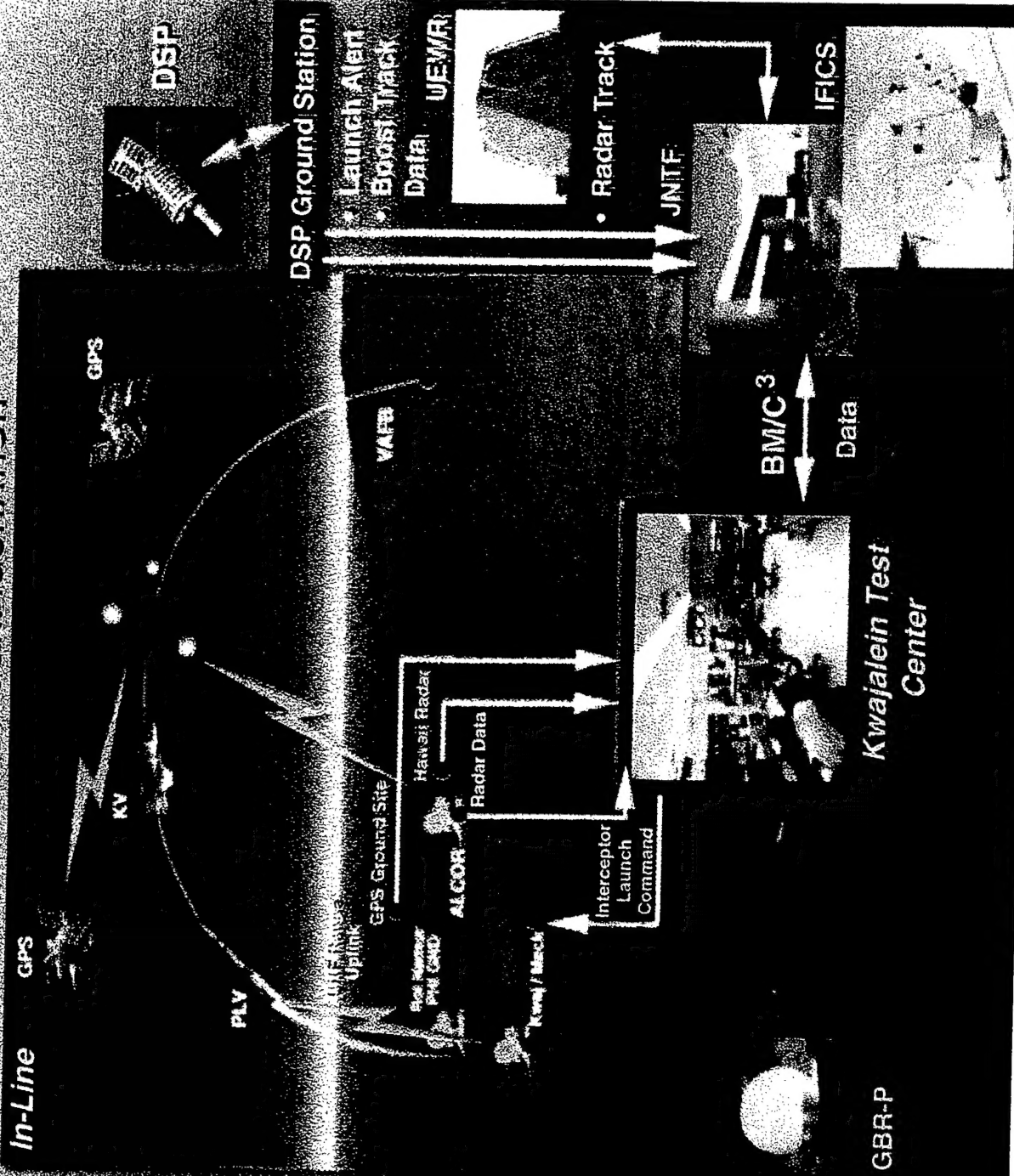
## Secondary Objective

- Sensor And BM/C<sup>3</sup> Test
  - Detection And Acquisition
  - System Track Performance
  - Integration Of System Elements
- Data Collection
  - V&V Of Models And Simulations
  - Element And System Performance Analyses
  - Impact And Lethality Analyses
  - Reliability, Availability, Maintainability Analyses
  - Assessment Of Test Infrastructure



# IFT-3: FLIGHT TEST CONFIGURATION

## IFT-3: FLIGHT TEST CONFIGURATION







## IFT-3 BOTTOM LINE



- IFT-3 Is A Complex Undertaking
- Primary Objective Is To Demonstrate EKV Flight Test Performance
- IFT-3 Will Provide Critical Data For Further Development



## DEPLOYMENT STATUS



### *Grand Forks, ND*

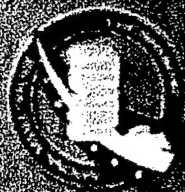


- Fact Finding Visits And Siting Studies Conducted For ND And AK
- Notice Of Intent (NOI) - NOV 98
- Prototype Site Designs Initiated
- Public Scoping Meeting Held In AK, ND And VA - DEC 98
- Draft Environmental Impact Statement (EIS) - 4Q99
- Public Hearings On Draft EIS Scheduled
- Industry Briefings For Construction Contracts - 1Q00
- 100% Site Designs Complete - JAN 00

### *Fort Greely, AK*



# ACCOMPLISHMENTS



National Missile Defense  
Joint Program Office

Program Restructured To  
"Phased Deployment"



Lead System Integrator  
Contract Awarded



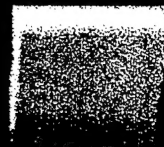
Battle Management  
Cmd, Ctrl, & Comm  
Capability Increment 3

Risk Reduction Flights 1-5  
Integrated Ground Test 1A-3  
Integrated Flight Tests 1A & 2

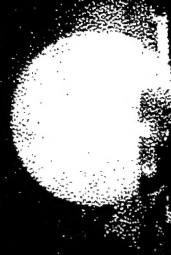
Grand  
Forks

Fort Greely, AK

Scoping Visits Conducted  
EIS Underway  
For ND & AK



System  
Requirements  
Documents



Construction At  
Kwajalein